CLAIMS

It is claimed:

1. A transceiver, comprising:

a receiver;

a transmitter;

a first antenna port;

a second antenna port;

a first switching element to selectively couple said first antenna port to said receiver;

a second switching element to selectively couple said second antenna port to said transmitter; and

a third switching element to selectively couple said second antenna port to said receiver.

2. The transceiver of claim 1, wherein said third switching element comprises a resonant switch which is configurable as a parallel resonant circuit in a first mode to substantially isolate said second antenna port from said receiver, and configurable as a coupling circuit in a second mode to substantially couple said second antenna port to said receiver.

3. The transceiver of claim 1, wherein said receiver comprises a direct conversion receiver, a heterodyne receiver or a super heterodyne receiver.

4. The transceiver of claim 1, wherein said transmitter comprises a direct conversion transmitter, a heterodyne transmitter or a super heterodyne transmitter.

5. The transceiver of claim 1, wherein said first switching element comprises a transistor.

6. The transceiver of claim 5, wherein said transistor comprises a field effect transistor.

7. The transceiver of claim 1, wherein said second switching element comprises a transistor.

8. The transceiver of claim 7, wherein said transistor comprises a field effect transistor.

9. The transceiver of claim 2, wherein said resonant circuit comprises:

a first capacitive element;

a second capacitive element;

a series inductive element coupled to said first capacitive element at a first node, and to said second capacitive element at a second node;

a fourth switching element to selectively couple said second node to ground potential; and

a fifth switching element to selectively couple said second node to said receiver.

10. The transceiver of claim 9, wherein said first capacitive element comprises a capacitor.

11. The transceiver of claim 9, wherein said second capacitive element comprises a capacitor.

12. The transceiver of claim 9, wherein said fourth switching element comprises a transistor.

13. The transceiver of claim 12, wherein said transistor comprises a field effect transistor.

14. The transceiver of claim 9, wherein said fifth switching element comprises a transistor.

15. The transceiver of claim 14, wherein said transistor comprises a field effect transistor.

16. The transceiver of claim 2, wherein said resonant circuit comprises:

a first capacitive element;

a second capacitive element;

an inductive element coupled to said first capacitive element at a first node, and to said second capacitive element at a second node;

a fourth switching element to selectively couple said first capacitive element to said second node;

a fifth switching element to selectively short out said second capacitive element, wherein said fifth switching element is electrically connected between said second node and a third node; and

a sixth switching element to selectively couple said third node to said receiver.

17. The transceiver of claim 16, further comprising a seventh switching element to selectively couple said receiver to ground potential.

18. The transceiver of claim 1, wherein said transceiver is configured as a monolithic transceiver.

19. The transceiver of claim 1, further comprising:

a first antenna coupled to said first antenna port; and

a second antenna coupled to said second antenna port.

20. The transceiver of claim 1, further comprising an electrostatic discharge (ESD) protection circuit coupled to said second antenna port.

21. The transceiver of claim 20, wherein said ESD protection circuit comprises an inductive element.

22. A method of receiving a signal comprising directing said signal received from a first antenna port to a receiver while substantially isolating a second antenna port from said receiver using a parallel resonant circuit.

23. The method of claim 22, further comprising substantially isolating said second antenna port from a transmitter while said signal is being directed to said receiver.

24. A method of transmitting a signal comprising directing said signal to a first antenna port from a transmitter while substantially isolating a receiver and a switching element using a parallel resonant circuit, wherein said switching element selectively couples said receiver to a second antenna port.

25. The method of claim 24, further comprising substantially isolating said second antenna port from said receiver while said signal is being directed to said first antenna port.

26. A method of receiving a signal comprising directing said signal from a first antenna port to a receiver by way of a coupling circuit while substantially isolating a second antenna port from said receiver.

27. The method of claim 26, further comprising substantially isolating said first antenna port from a transmitter while said signal is being directed to said receiver.